

1 Sensor Performance

The following Table 1 and Table 2 list the specifications of the SLF3S-1300F liquid flow sensor for. The product comes fully calibrated for water (H₂O) and Isopropyl alcohol (IPA).

Parameter	SLF3S-1300F	Unit
H ₂ O Full scale flow rate	±40	ml/min
H ₂ O Sensor output limit ¹	±65	ml/min
Accuracy ² (whichever error is larger)	±5 0.05	% of measured value ml/min
Repeatability ² (whichever error is larger)	±0.5 0.01	% of measured value ml/min
Temperature coefficient ³ (additional error / °C; whichever is larger)	0.2 0.002	% measured value / °C ml/min / °C
Mounting orientation sensitivity ⁴	<0.02	ml/min

Table 1: Specifications for liquid flow sensor SLF3S-1300F (all data for medium H₂O, at 23 °C, and for VDD 3.5 V)

Parameter	SLF3S-1300F	Unit
IPA Full scale flow rate	±40	ml/min
IPA Sensor output limit ¹	±65	ml/min
Accuracy (whichever error is larger)	±10 0.2	% of measured value ml/min
Repeatability (whichever error is larger)	±0.5 0.01	% of measured value ml/min
Temperature coefficient ³ (additional error / °C; whichever is larger)	0.2 0.004	% measured value / °C ml/min / °C
Mounting orientation sensitivity ⁴	<0.05	ml/min

Table 2: Specifications for liquid flow sensor SLF3S-1300F (all data for medium IPA, at 23 °C, and for VDD 3.5 V)

¹ Flow rate at which the sensor output saturates. See section 1.1 for performance between full scale and saturation point.

² Accuracy respectively repeatability specifications valid for flow rates below ±20 ml/min. See the charts in section 2 for the accuracy and repeatability specifications, respectively, between ±20 ml/min and full scale.

³ Additional accuracy error in case liquid and ambient temperatures are similar but both deviating from 23 °C.

⁴ Maximum additional error when flow channel is vertical.

1.1 Specification Charts

The SLF3S-1300F liquid flow sensor shows bi-directional, linear transfer characteristics. The product comes fully calibrated for water (H₂O) and Isopropyl alcohol (IPA).

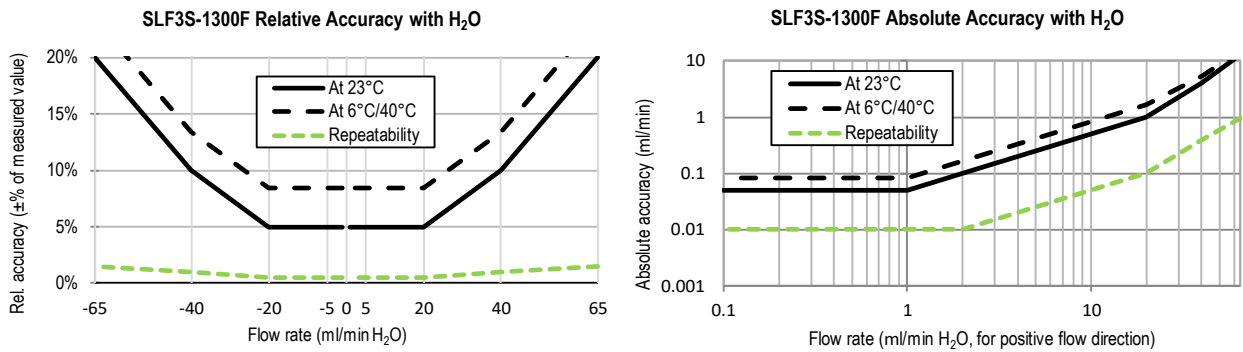


Figure 1: Left: Liquid flow sensor accuracy and repeatability across the flow range of the SLF3S-1300F. Relative error in $\pm\%$ of measured value for H₂O. Right: Liquid flow sensor accuracy and repeatability across the positive flow range of the SLF3S-1300F. Absolute error in ml/min for H₂O.

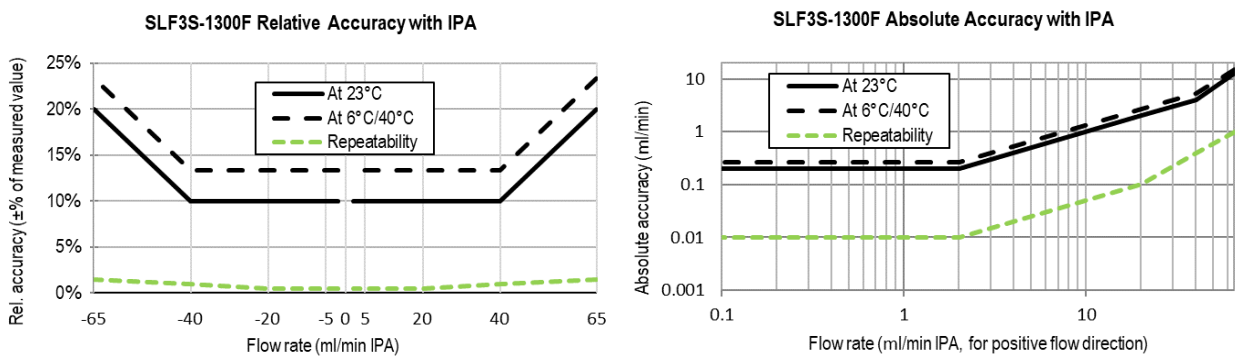


Figure 2: Left: Liquid flow sensor accuracy and repeatability across the flow range of the SLF3S-1300F. Relative error in $\pm\%$ of measured value for IPA. Right: Liquid flow sensor accuracy and repeatability across the positive flow range of the SLF3S-1300F. Absolute error in ml/min for IPA.